



PTO/SB/08A (08-03)

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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1 of 3

Complete if Known

Application Number	10/634,180
Filing Date	08-05-2003
First Named Inventor	Amy Mae Bunker
Art Unit	1014 1624
Examiner Name	Unknown
Attorney Docket Number	PC25245A

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
ER		US- 10/071,032	02-08-2002	Dyer, et al	
		US- 2002/0156061 A1	10-24-2002	Barvian, et al	
		US- 2003/0004172 A1	01-02-2003	Harter, et al	
		US- 2003/0078276 A1	04-24-2003	Andrianjara, et al	
		US- 2002/0193377 A1	12-19-2002	Andrianjara, et al	
		US- 2002/0151558 A1	10-17-2002	Andrianjara, et al	
		US- 2002/0156069 A1	10-24-2002	Picard, et al	
		US- 6,656,932 B2	12-02-2003	Picard, et al	
		US- 2002/0161000 A1	10-31-2002	Barvian, et al	
		US- 2003/0087924 A1	05-08-2003	Sorenson	
		US- 2003/0144274 A1	07-31-2003	Bunker, et al	
		US- 2002/0151555 A1	10-17-2002	Barvian, et al	
		US- 2003/0130278 A1	07-10-2003	Gaudilliere, et al	
		US- 2003/0216402 A1	11-20-2003	Gaudilliere, et al	
		US- 2003/0220355 A1	11-27-2003	Gaudilliere, et al	
		US- 2004/0006077 A1	01-08-2004	Gaudilliere, et al	
		US- 10/634,531	08-05-2003	Johnson	
		US- 10/634,709	08-05-2003	Bunker, et al	
		US- 10/634,162	08-05-2003	Wilson	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)			
ER		WO 02/064599 A1	08-22-2002	Dyer, et al	
		WO 02/064547 A2, A3	08-22-2002	Barvian, et al	
		WO 02/064598 A1	08-22-2002	Harter, et al	
		WO 02/064080 A2, A3	08-22-2002	Andrianjara, et al	
		WO 02/064572 A1	08-22-2002	Andrianjara, et al	
		WO 02/064595 A1	08-22-2002	Andrianjara, et al	

Examiner Signature	<i>Dunick</i>	Date Considered	9/7/04
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Sheet 2 of 3**Complete if Known**

Application Number	10/634,180
Filing Date	08-05-2003
First Named Inventor	Amy Mae Bunker
Art Unit	1614 1624
Examiner Name	Unknown
Attorney Docket Number	PC25245A

U. S. PATENT DOCUMENTS					
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		Number-Kind Code ² (if known)			
VR		US- 10/634,473	08-05-2003	Bunker, et al	
VR		US- 10/634,289	08-05-2003	Bunker, et al	
		US-			
VR		US- 10/634,712	08-05-2003	Hicks, et al	
VR		US- 10/634,181	08-05-2003	Li	
VR		US- 10/634,489	08-05-2003	Roark	
VR		US- 10/634,420	08-05-2003	Roark	
VR		US- 10/634,716	08-05-2003	Nahra, et al	
VR		US- 10/634,288	08-05-2003	O'Brien	
VR		US- 10/634,717	08-05-2003	Nahra, et al	
VR		US- 10/634,177	08-05-2003	Wilson	
VR		US- 10/634,290	08-05-2003	Wilson	
VR		US- 10/634,182	08-05-2003	Li	
VR		US- 10/634,419	08-05-2003	Hicks, et al	
VR		US- 10/634,713	08-05-2003	Picard	
VR		US- 10/634,225	08-05-2003	Picard, et al	
VR		US- 10/634,718	08-05-2003	Ortwine	
VR		US- 10/739,261	12-18-2003	Bunker, et al	
		US-			

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VR		WO 02/064578 A1	08-22-2002	Picard, et al	
VR		WO 02/064571 A1	08-22-2002	Barvian, et al	
VR		WO 02/064568 A1	08-22-2002	Barvian, et al	
VR		WO 03/032999 A1	04-23-2003	Bunker, et al	
VR		WO 03/033478 A1	04-24-2003	Gaudilliere, et al	
VR		WO 03/076417 A2, A3	09-18-2003	Gaudilliere, et al	

Examiner Signature	<i>Ryanek</i>	Date Considered	9/7/04
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 3 of 3

Complete if Known

Application Number	10/634,180
Filing Date	08-05-2003
First Named Inventor	Amy Mae Bunker
Art Unit	1614 1624
Examiner Name	Unknown
Attorney Docket Number	PC25245A

U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature	<i>Dunak</i>	Date Considered	2/7/04
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<h1>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h1> <p><i>(Use as many sheets as necessary)</i></p>				Application Number	10/634,180
				Filing Date	August 5, 2003
				First Named Inventor	Bunker, et al
				Art Unit	1624
				Examiner Name	Deepak R. Rao
				Attorney Docket Number	PC 25245A
Sheet	1	of	4		

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	† ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (If known)				
VR		EP 0 935 963 A2/A3	08/18/1999	McClure, et al.		
VR		EP 1 069 110 A1	01/17/2001	Kimura, et al.		
VR		EP 1 138 680 A1	10/04/2001	Noe		

Examiner Signature	<i>Gregory R. Long</i>	Date Considered	9/6/04
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	10/634,180
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				Sheet	2

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		Country Code ² Number ⁴ Kind Code ³ (if known)				
WJ		WO 00/09485 A1	02/24/2000	McClure, et al.		
WJ		WO 01/12611 A1	02/22/2001	Blagg		
WJ		WO 01/63244 A1	08/30/2001	Chen, et al.		
WJ		WO 02/34726 A2/A3	05/02/2002	Noe, et al.		
WJ		WO 02/34753 A2/A3	05/02/2002	Bronk, et al.		

Examiner Signature	<i>Quynh Nguyen</i>	Date Considered	9/6/04
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Substitute for form 1449B/PTO		Complete If Known			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Application Number	10/634,180		
		Filing Date	August 5, 2003		
		First Named Inventor	Bunker, et al		
		Art Unit	1624		
		Examiner Name	Deepak R. Rao		
Sheet	3	of	4	Attorney Docket Number	PC 25245A

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
VR		BILLINGHURST, et al., Comparison of the Degradation of Type II Collagen and Proteoglycan in Nasal and Articular Cartilages Induced by Interleukin-1 and the Selective Inhibition of Type II Collagen Cleavage by Collagenase, Arthritis & Rheumatism, 2000; 43(3): 664-672	
VR		BILLINGHURST, et al., Enhanced Cleavage of Type II Collagen by Collagenases in Osteoarthritic Articular Cartilage, J. Clin Invest., 1997; 99(7): 1534-1545	
VR		CHEN, et al., Structure-Based Design of a Novel, Potent, and selective Inhibitor for MMP-13 Utilizing NMR Spectroscopy and Computer-Aided Molecular Design, J. Am. Chem. Soc., 2000; 122: 9648-9654	
VR		DAHLBERG, et al., Selective Enhancement of Collagenase-mediated Cleavage of Resident Type II Collagen in Cultured Osteoarthritic Cartilage and Arrest with a Synthetic Inhibitor that Spares Collagenase 1 (Matrix Metalloproteinase2), Arthritis & Rheumatism, 2000; 43(3): 673-682	
VR		HIROTA, et al., Novel Synthesis of Pyrido[3,4-d]pyrimidines, Pyrido[2,3-d]pyrimidines, and Quinazolines via Palladium-catalyzed Oxidative Coupling, Heterocycles, 1994; 37(1): 563-570	
VR		LOVEJOY, et al., Crystal structures of MMP-1 AND -13 reveal the structural basis for selectivity of collagenase inhibitors, Nature Structural Biology, 1999; 6(3): 217-221	
VR		MITCHELL, et al., Cloning, Expression, and Type II Collagenolytic Activity of Matrix Metalloproteinase-13 from Human Osteoarthritic, Cartilage, J. Clin. Invest., 1996; 97: 761-768	
VR		MOKROSZ, et al., Structure-activity relationship studies of CNS agents. Part 10(1): 1-Aryl-2-[3-(4-aryl-1-piperazinyl)propyl]-1,4-dihydro-3(2H)-isoquinolinones: two modes of the interaction with the 5-HT1A receptor site. Pharmazie, 1994; 49(5): 328-33	
VR		MOY, et al., High-resolution Solution Structure of the Catalytic Fragment of Human Collagenase-3 (MMP-3) Complexed with a Hydroxamic Acid Inhibitor, J. Mol. Biol., 2000; 302: 671-689	
VR		NEUHOLD, et al., Postnatal expression in hyaline cartilage of constitutively active human collagenase-3 (MMP-13) induces osteoarthritis in mice, J. Clin. Invest., 2001; 107(1): 35-44	

Examiner Signature	<i>Deepak Rao</i>	Date Considered	9/6/04
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				First Named Inventor	Bunker, et al.
				Art Unit	1624
				Examiner Name	Deepak R. Rao
				Attorney Docket Number	PC 25245A
Sheet	4	of	4		

[illegible]

Examiner Signature		Date Considered	
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